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NOTES OF A WILD GARDEN.

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Possibly some of the readers of Rhodora may be interested in the experiment of a wild garden which I planned and started some twelve years since, on a two-acre lot about eleven miles from the city of St. John, New Brunswick. The plan was somewhat ambitious, being intended to show within this small area all the flowering plants and ferns, and their allies of New Brunswick, with possibly a few others, trees and shrubs from other latitudes, for the purpose of comparison. The latter are kept quite distinct from the "Natives" in the cultivated or open portions of the garden.

The abundant shade of a fine grove, with a northern exposure and a depression running through it, in which is retained ample moisture during the dry season, furnishes a suitable habitat for ferns and other plants requiring shade and moisture. The rocks and miniature gorges of the grove have welcomed the ferns especially; and, almost without effort, beyond the transplanting, these interesting plants of the provinces, with but few exceptions, have flourished in the natural home provided for them. And here it may be said, the whole aim in the management of the garden has been to let nature have a free hand with the exception of necessary clearing and pruning, and to obey her more obvious dictates.

In one corner of the garden is a meadow very suitable for the plants from the alluvial river bottoms of the upper St. John and its tributaries, and the Restigouche and other rivers of the Province. This meadow represents considerable toil as well as pleasure, but the results have not always been what my too sanguine hopes led me to expect. The meadow was teeming with yegetation when I began, and the original inhabitants have made a stern fight against extirpation in

order to afford a habitat for the northern hordes brought in to disturb their hitherto peaceful life. But as I look upon those transplanted ones, that have grown and flourished, they recall—and I live over again—canoe voyages on northern rivers, tent-life amid woodland scenery, the sight of large game in these solitudes, deadly struggles with small game, such as mosquitoes and black flies, as I dug up the coveted treasures and, with wearied arms and back, toiled through thickets and bogs to bring them safely to their destination.

But the pièce de resistance in this meadow has been the brook. My plan was to turn it aside in quiet bays and little placid lakes, on whose bosom should repose water lilies, and where I should have at a glance all our aquatic plants. But the turbulent little stream, dashing down from the adjacent hill sides, has carried away — root and branch — the plants placed too confidingly within the limits of its bed. It refuses to become a partner to my scheme and emits a gurgle of delight at every fresh failure of mine to win it over, or at least to secure its passive non-resistance.

Beyond, to the southward, there rises a hill whose fertility has been drained to enrich the grove and meadow below it. The soil is dry and poor, covered with a growth of pines, firs, birches, shrubs and heath plants. Here the Heather (Calluna vulgaris), transplanted from Point Pleasant Park, Halifax, has flourished for several years—an evidence of the sterility of the soil. Here stands an aged white pine, the sole survivor of a fire which swept over the place scarcely two decades ago. The scarred and blackened trunk and upper branches, extended imploringly, tell of its struggle for life. Crossing a slight depression another knoll is reached on which stands a small summer cottage where I shall be glad to welcome any reader of Rhodora and show him, in part at least, a wild garden of New Brunswick plants, with, alas, the graves of some of those that have perished because of the too near approach to the Bay of Fundy's chill fogs and winds.

In the garden there are over five hundred species of flowering plants and ferns, many of which were in situ, while others have been planted during the past twelve years. The ferns, trees and shrubs, and those flowering plants most easily transferable are more largely represented. The ferns embrace a nearly complete list of this class of New Brunswick plants. The trees and shrubs are also well represented. Of the eighty species found in the province more than two-

thirds are growing and in good condition, and in a short time I hope to have this portion of our flora complete. Little or no attempt has been made to arrange the plants according to any system of classification, the chief aim being to provide natural habitats and surroundings, as far as possible. For a record of observations, made up to the end of the season of 1898, on the plants of the garden I may refer any one interested to Bulletin XVII of the Natural History Society of New Brunswick.

ST. JOHN, NEW BRUNSWICK.

THE FRUITING OF RICCIA NATANS.

A. B. SEYMOUR.

Riccia natans is abundant in a small pond near Mount Auburn, Cambridge. Early in the season the surface of the pond is well covered with it, as observed by Prof. L. M. Underwood and myself in 1891. Presumably, it abounds every spring, but I have given it no attention since 1891, till now. Early this spring it was floating in great abundance along the shore of the pond. In June the pond, which is shallow, becomes filled with a growth of water-grasses and other plants, and the water in the pond is considerably lower than at first, even in a season that is not very dry.

The tendency of the winds is to wash the floating *Riccia* ashore and as the water recedes the plants are left on the mud. Weeds soon spring up and hide them.

I have heard conflicting reports regarding the fruiting of this plant. One says it fruits floating, another that it fruits on the mud. The fact is, that fruit is found after the spores have had time to mature. I have examined the plants this spring, from week to week, from the earliest indication of fruiting to the completion of mature spores. The first mature spores were found about June 1, on both floating plants and those fixed to the mud. Now, at the end of June, no floating plants are seen. Plants on the mud have abundant spores at full maturity. The fruit is figured in Gray's Manual.

CAMBRIDGE, MASS.